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Pictorial notes on the early stages on the *Lepidoptera* of Turkey –II. *Thaleropsis ionia* (Anadolu Şehzadesi)

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Abstract: Pictorial notes on the early stages on the *Lepidoptera* of Turkey – II. *Thaleropsis ionia* (Anadolu Şehzadesi). *Cesa News* 91: 1-12, 20 figs.

In this paper, the early stages of *Thaleropsis ionia* (Ev.) are illustrated from Turkey for the first time. The egg was discovered on a *Celtis* leaf at Komato (Beytüşşebap, Şırnak Prov., SE Turkey). All the development stages of the species are described and illustrated. Literary information is also evaluated. *Celtis glabrata* (*Ulmaceae*) is recorded here as larval food-plant of the species for the first time.

Key words: *Thaleropsis ionia*, *Argynnidae*, *Lepidoptera*, early stages, egg, larva, pupa, adult, morphology, Turkey, Şırnak, Beytüşşebap, Komato.

First description of the caterpillar and the pupa of *Thaleropsis ionia* Ev. (Anadolu Şehzadesi) has been given by Staudinger (1878: 259-262) from the vicinity of Amasya. Hesselbarth, *et al* (1995: 971) stated: “Nekrutenko fand die Raupen im Chosrov-Natur-Reservat (Republik Armenien) nur an Weide (*Salix*)”. In Hesselbarth’s publication, no new information about the early stages of *Thaleropsis ionia* Ev. is found. They repeated only Staudinger’s description, made in 1878. For 135 years, no confirmation about the Staudinger’s description, or new, and more detailed, illustrated information on this subject has been published.

During excursions of the authors to Beytüşşebap (Şırnak Province) in early May of 2013, first author discovered at Komato (**Fig.1**) an egg freshly laid on a *Celtis* leaf by an argynnid (**Figs.2,3**). Butterflies, feeding on *Celtis* leaves like *Euapatura mirza*, *Libythea celtis* have already been recognized by us (Koçak & Kemal, 2002; Koçak & Kemal, 2007; Kemal & Koçak, 2012). At that time, we doubted about the identity of this egg as *Thaleropsis ionia*. We couldn’t be certain of it, until its emergence. However, some similarities between *Euapatura* and our species appeared in the caterpillar stage as “apaturid-type”.

The caterpillar of this species has been reared in captivity with care on *Celtis glabrata* (*Ulmaceae*), its natural food-plant, obtained at first from its natural territory, later from Çatak valley in Van Province, where *Celtis* bushes grow sparsely on rocky slopes. *Celtis glabrata* is recorded here as larval food-plant of the species for the first time.

The egg found has been photographed in nature (**Figs. 2,3**), later under the Leica Microscope (**Fig.4**). About larval behaviour, two remarkable cases should be explained here. Firstly, the caterpillar of *Thaleropsis ionia* is usually moveless. It sits inside the rolled leaf (**Fig.9**); therefore, it is hard to find it under natural conditions. Secondly, when hungry, it leaves its place, feeds the leaves in a short time, then turns to the same rolled leaf for continuing to rest.

The egg of *Thaleropsis ionia* is typical argynnid form, with 19 well defined ribbed (**Fig.4**). Size of the of the caterpillar varies approximately 3 mm to 25 mm (first to last instar) [Comparatively smaller than the size, given by Staudinger]. The caterpillar always in green colour with black, bi-lobed head capsule. Ventrally, ground colour, thoracic and abdominal legs creamy-white, semi-transparent. Two projections on sides of vertex and dorso-lateral anal extensions are visible from 2nd instar on (**Fig.7**). In 2nd instar, dorso-lateral yellowish longitudinal lines appear. Towards end of this instar transversal and lateral yellowish linear markings and spots become visible (**Fig.8**). In third instar, surface of black head capsule no more smooth; more or less dentated at dorsal and lateral borders (**Fig.11**). Frons with a typical marking in green colour. In 4th and 5th instars, new linear greenish markings on head appear (**Fig.12**). Typical greenish marking on frons looks like a spanned butterfly (**Fig.12**). Body of full grown caterpillar is spindle-like (**Figs.13, 14**).

Prepupal stage begins on 29 May (**Fig.15**). This intermediate stage continues until pupation, i.e., 1 June 2013. Pupa also spindle-like in shape, with a strong dorsal carina (**Figs. 16, 17**). General colouration and markings almost similar to those of caterpillar. The adult emerges on 11 June, 2013 (**Figs. 18, 19**). Adult and pupal skin (**Fig. 20**) are preserved in the Cesa collection.

All the stages, the egg, caterpillar, prepupa, pupa are illustrated here for the first time. Egg and prepupa are described here for the first time. Larval and pupal description, also larval behaviour of the species are similar to Staudinger's ones.



Fig. 1 – Habitat of *Thaleropsis ionia* (*Argynnidae*), rocky slopes with sparse *Quercus*, *Celtis*, *Acer*, *Crataegus* trees. Komato 1060m (Beytüşşebap, Şırnak Province), on 4 May, 2013, photo M. Kemal (Cesa)



Fig.2 – Laid egg on *Celtis* leaf on 3 5 2013 by *Thaleropsis ionia*. Turkey, Şırnak Prov., Beytüşşebap, Komato 1060m
photo M Kemal (Cesa)



Fig.3 - Laid egg on *Celtis* leaf on 3 5 2013 by *Thaleropsis ionia*. Turkey, Şırnak Prov., Beytüşşebap, Komato 1060m
photo M Kemal (Cesa)



Fig.4 - Laid egg on *Celtis* leaf, photograph was taken under Leica Microscope on 6 5 2013, photo M Kemal (Cesa)



Fig. 5 - Left chorion after hatching on 7 5 2013 in captivity, photo M Kemal (Cesa)

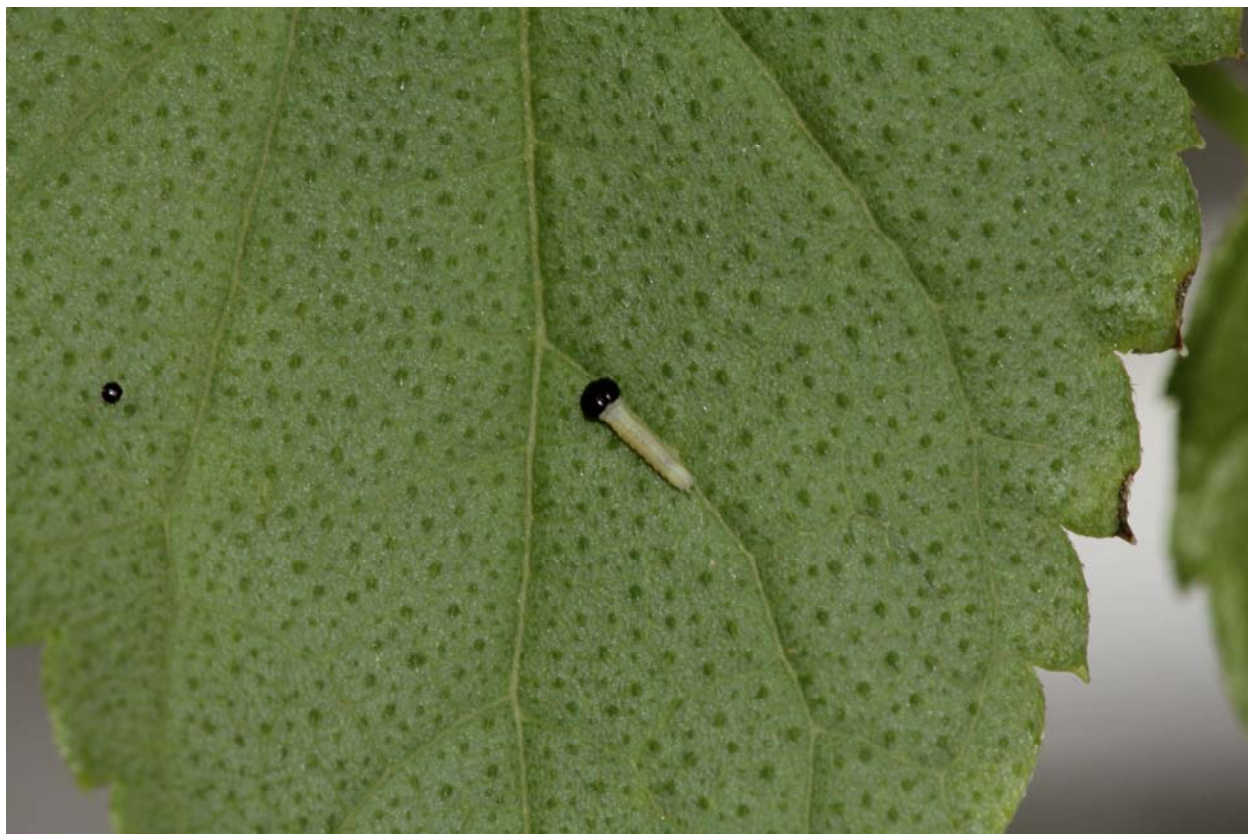


Fig. 6 – First instar of the caterpillar of *Thaleropsis ionia*, in captivity on 7 5 2013, photo M Kemal (Cesa)



Fig. 7 – Second instar of the caterpillar of *Thaleropsis ionia*, in captivity on 11 5 2013, photo M Kemal (Cesa)



Fig. 8 – End of second instar of the caterpillar of *Thaleropsis ionia*, in captivity on 14 5 2013, photo M Kemal (Cesa)



Fig. 9 – Third instar of the caterpillar of *Thaleropsis ionia*, in captivity on 17 5 2013. Caterpillar protects itself inside of the rolled leaf, photo M Kemal (Cesa).



Fig. 10 – Third instar of the caterpillar of *Thaleropsis ionia*, in captivity on 17 5 2013, photo M Kemal (Cesa).



Fig. 11 – End of the third instar of the caterpillar of *Thaleropsis ionia*, in captivity on 19 5 2013. Frons with typical greenish marking, photo M Kemal (Cesa).



Fig. 12 – 4th instar of the caterpillar of *Thaleropsis ionia*, in captivity on 22 5 2013. Frons with typical greenish marking on frons changes into a marking of spanned butterfly, photo M Kemal (Cesa).



Fig. 13 – Full grown caterpillar of *Thaleropsis ionia*, in captivity on 26 5 2013. Frons with typical greenish marking on frons changes into a marking of spanned butterfly, photo M Kemal (Cesa).



Fig. 14 – Full grown caterpillar of *Thaleropsis ionia*, in captivity on 28 5 2013, photo M Kemal (Cesa)



Fig. 15 – Prepupa of *Thaleropsis ionia*, in captivity on 29 5 2013, photo M Kemal (Cesa)



Fig. 16 – Lateral view of the pupa of *Thaleropsis ionia*, in captivity on 16 2013, photo M Kemal (Cesa).



Fig. 17 – Dorsal view of the pupa of *Thaleropsis ionia*, in captivity on 16 2013, photo M Kemal (Cesa).



Fig. 18– Lateral view of the adult of *Thaleropsis ionia*, in captivity on 11 6 2013, photo M Kemal (Cesa).

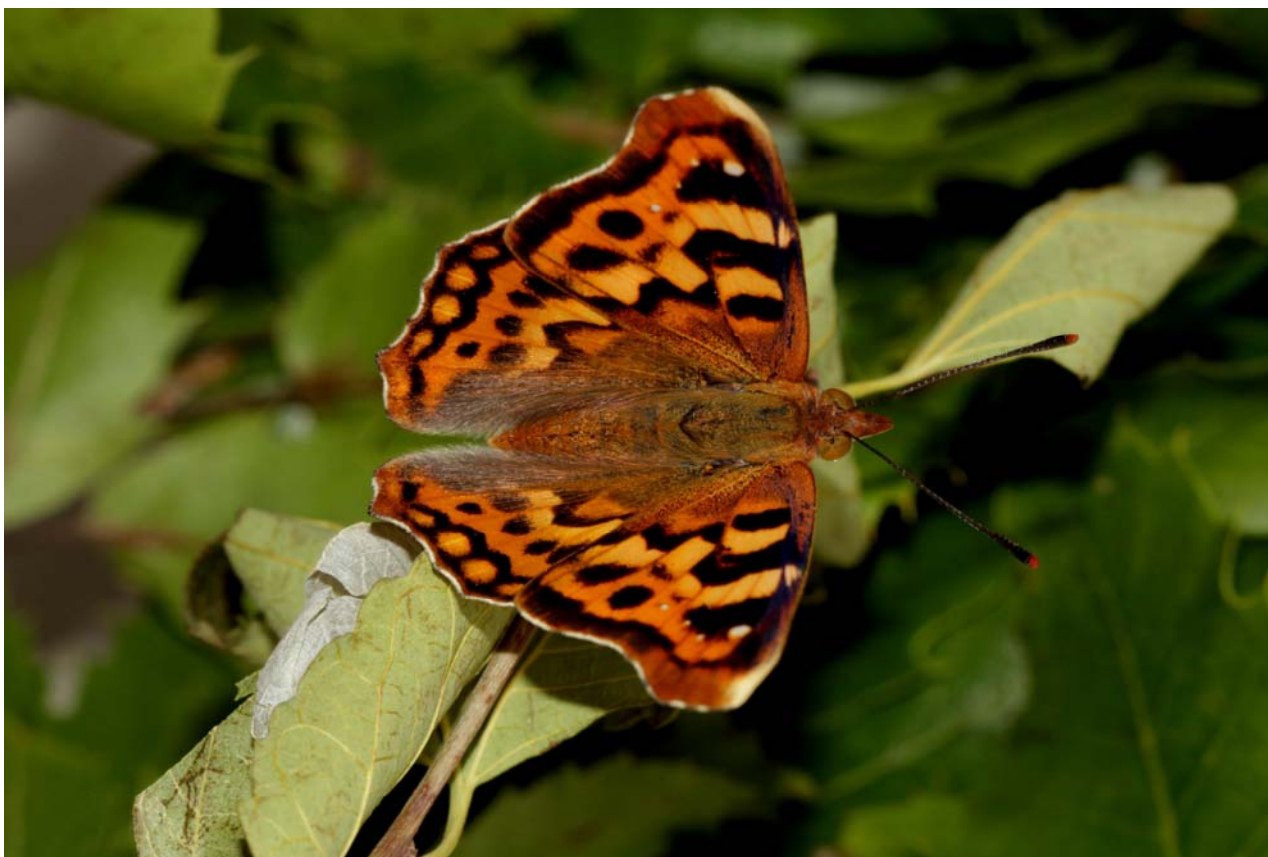


Fig. 19– Dorsal view of the adult of *Thaleropsis ionia*, in captivity on 11 6 2013, photo M Kemal (Cesa).



Fig. 20— Dorsal view of the pupal skin of *Thaleropsis ionia*, in captivity on 11 6 2013, photo M Kemal (Cesa).

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